

[DOCUMENT] Abstract

[ABSTRACT]

[PURPOSES] The object of the invention is to obtain a trim appearance having windows without braces though the steel portal frames are applied to the outside of existing building, and is to maintain the combination of steel portal frame and RC-structure as long as possible under the horizontal load repeated during a big earthquake.

[INVENTION] A portal frame 3 made of wide flange sections without braces is fixed to the external surfaces of existing RC-column 5 extending in the vertical direction and to the external surfaces of existing RC-beam 8 extending in the horizontal direction of the building. The wide flange section column 4 fixed to existing RC-column 5 is assigned to the bending rigidity roughly equivalent to that of existing RC-column 5, whereby, reducing the stress additionally occurred at the connecting part between existing RC-column 5 and column 4 by deforming the column 4 similarly to existing RC-column 5 under the horizontal load transmitted from existing RC-beam 8 and/or wide flange section beam 6 during an earthquake.

[SELECTED DRAWING] Fig. 1